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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/801,106 | 02/28/2001 | Koji Egashira | 33082M072 | 8270 |

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EXAMINER

PERRIN, JOSEPH L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1746

DATE MAILED: 06/23/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,106

Applicant(s)

EGASHIRA ET AL.

Examiner

Joseph Perrin, Ph.D.

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) 9-18 and 21-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-18, 21 and 24 is/are rejected.
- 7) ☒ Claim(s) 22-23 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. In view of applicant's amendment filed 02 April 2003 (Paper No. 7), the status of the application is as follows:

Drawings Objections

The proposed drawing corrections have been approved by the Examiner.

Specification Objections

The objection of the specification been withdrawn in view of applicant's amendment to the specification.

Claims Objections

The objections of claims 10 and 11 have been withdrawn in view of applicant's amendments to the claims.

Rejections under 35 U.S.C. §112, Second Paragraph

The rejection of claims 4-5 and 7-8 is withdrawn in view of the cancellation of the claims.

The rejection of claims 10-15 is withdrawn in view of the amendment to the claims and/or persuasive arguments presented by applicant.

35 U.S.C. §102(b) Rejections over Thompson et al.

The rejection of pending claims 1 (rewritten as claim 10), 11-13, 15-16 and 18 are maintained for reasons set forth below.

35 U.S.C. §103(a) Rejections over Thompson et al. alone or in view of Thoms

The rejection of claims 14 and 17 are maintained for reasons set forth below.

2. Applicant's arguments filed 02 April 2003 have been fully considered but they are not persuasive.

3. Re claim 10, applicant argues that Thompson "fails to inherently or explicitly disclose that the 'nozzle is formed so as to eject the processing liquid against each processing surface of the substrates so that a width of the plane-ejected processing liquid is generally equal to the diameter of the substrate on the processing surface'". This is not persuasive because how the nozzle operates relative to movable items to be cleaned, which are not considered structural limitations of claimed apparatus, are considered intended use and given little patentable weight. Moreover, as cited in the previous Office action, Thompson teaches that it is known to utilize fan-shaped nozzles (see, for instance, col. 6, lines 12-14), which are construed to be same of applicant, as further claimed in dependent claim 9.

4. Re claim 11, applicant argues that Thompson "fails to inherently or explicitly disclose that the 'pedestals are formed to incline so that the nozzle members can eject the processing liquid obliquely to the processing surfaces of the substrates.'" This is not persuasive because Thompson discloses pedestals and nozzles positioned obliquely,

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for instance, in Figure 4. Moreover, the phrase “so that the nozzle members can eject...” is considered intended use and given little patentable weight.

5. Re claim 18, applicant argues that Thompson “fails to inherently or explicitly disclose ‘an ejecting orifice formed on an inner face of the processing container so as to face the circular plate, for supplying a processing liquid to the circular plate’s surface facing the inner surface of the processing container.’” This is not persuasive because Thompson discloses an ejecting orifice on an inner face of the processing container (see, for instance, Figures 1-4). Moreover, the phrase “so as to face the circular plate, for supplying...” is considered intended use and given little patentable weight.

6. Re claim 14, applicant argues that Thompson and Thoms “fail to teach, hint, or suggest to one skilled in the art that a “nozzle is formed so as to eject the processing liquid against each processing surface of the substrates so that a width of the plane-ejected processing liquid is generally equal to the diameter of the substrate on the processing surface”. This is not persuasive because, as cited in the previous Office action and further discussed above, Thompson discloses plane-ejecting nozzles as claimed by applicant. It is noted that how the nozzles spray the items to be treated, e.g. spraying the width of the substrates, is considered intended use and given little patentable weight.

7. Re claim 17, applicant relies on the above arguments regarding claim 10 since claim 17 is dependent on claim 10. This is not persuasive for the reasons previously set forth re claim 10.

8. Re new claims 21 and 24, applicant’s comments are noted, but since these claims have not yet been treated on the merits applicant’s arguments are considered

moot. It is noted that applicant's arguments appear to rely on the same intended use as previously discussed and, therefore, will be treated accordingly.

Claim Objections

9. Claims 22-23 and 25 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Re claims 22-23, the claimed processing fluid usable in the apparatus is considered future intended use and, therefore, fails to provide any further structural limitation to the claimed apparatus. Re claim 25, how the substrates to be treated are rotated is considered future intended use and fails to provide any further structural limitation to the claimed apparatus.

Claim Rejections - 35 USC § 102

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 9-13, 15-16, 18, 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al. (US 5,022,419).

Thompson et al. discloses a liquid processing apparatus with processing container 12 having an angled lower portion, nozzle 28 with a plurality of orifices (i.e. 9 as shown in Figure 3), wafer holder 26 built with circular holder 122, for holding a plurality of wafers (including one for each orifice, i.e. 9), the container (including wafers)

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being rotatable, the orifices being positioned obliquely relative to the central axis of the wafers, relatively inclined, arranged above the wafers, and capable of spraying in a plane, or fan-shaped (see entire reference of Thompson et al., for instance, Figures 1-4, and col. 6, lines 12-14.

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. in view of Thoms (US 5,378,308).

As noted above, Thompson et al. discloses the claimed invention with the exception of first and second alternatively-positioned nozzles. Thoms teaches that it is known to provide alternatively-positioned nozzles in a liquid processing apparatus for the purpose of improving the uniform distribution of a processing liquid (see, for instance, Figures 2-5, and col. 1, lines 48-51).

Therefore, the position is taken that a person of ordinary skill in the art at the time the invention was made would have been motivated to modify the apparatus, disclosed by Thompson et al., with the alternatively-positioned nozzles, disclosed by Thoms, in order to improve the uniformed application of a processing liquid. The motivation for this combination is that it solves same problem of applicant (i.e. improvement of uniform application of processing liquid).

14. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al.

As noted above, Thompson et al. discloses the claimed invention except for the inside nozzle passage having a rectangular sectional shape. It would have been obvious to utilize any sectional shape for the inside nozzle passage capable of providing adequate processing liquid flow, since such a modification would have involved a mere change in the form or shape of a component. A change in form or shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

16. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Perrin, Ph.D. whose telephone number is (703)305-0626. The examiner can normally be reached on M-F 7:30-5:00, except alternate Fridays.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703)308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

19. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Joseph Perrin, Ph.D.
Examiner
Art Unit 1746

jlp
June 17, 2003


RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700